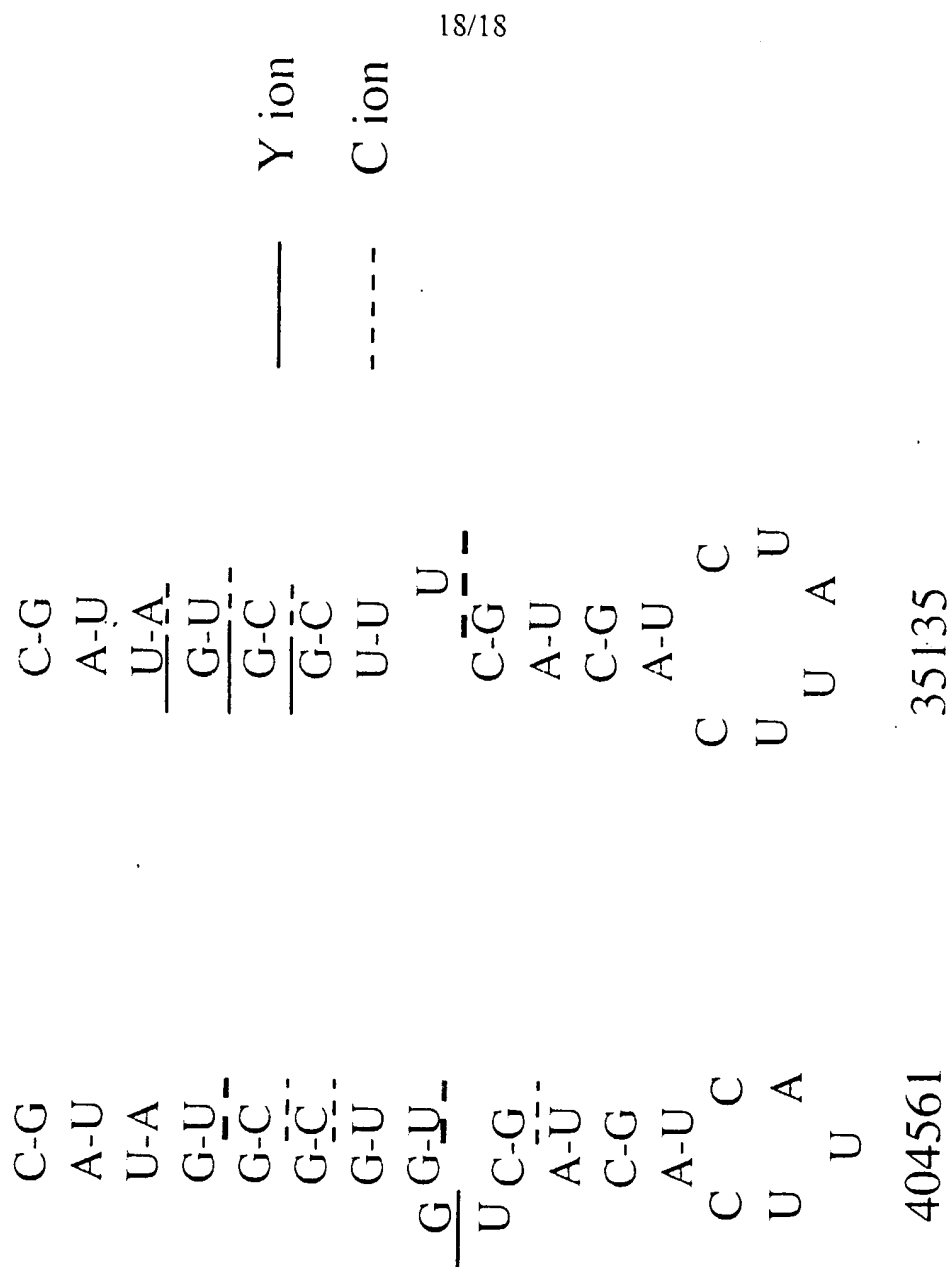


FIGURE 1

Figure 15



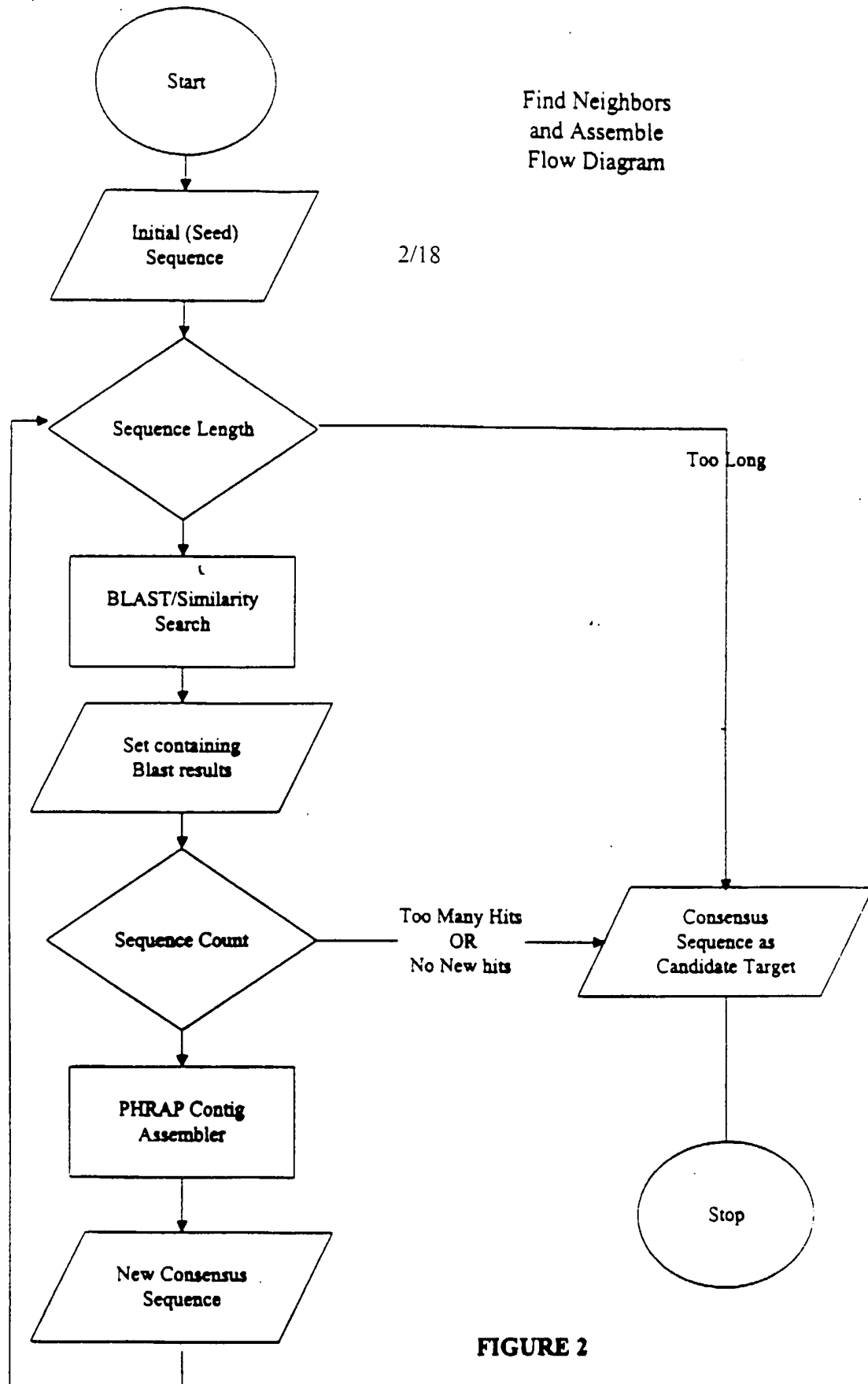
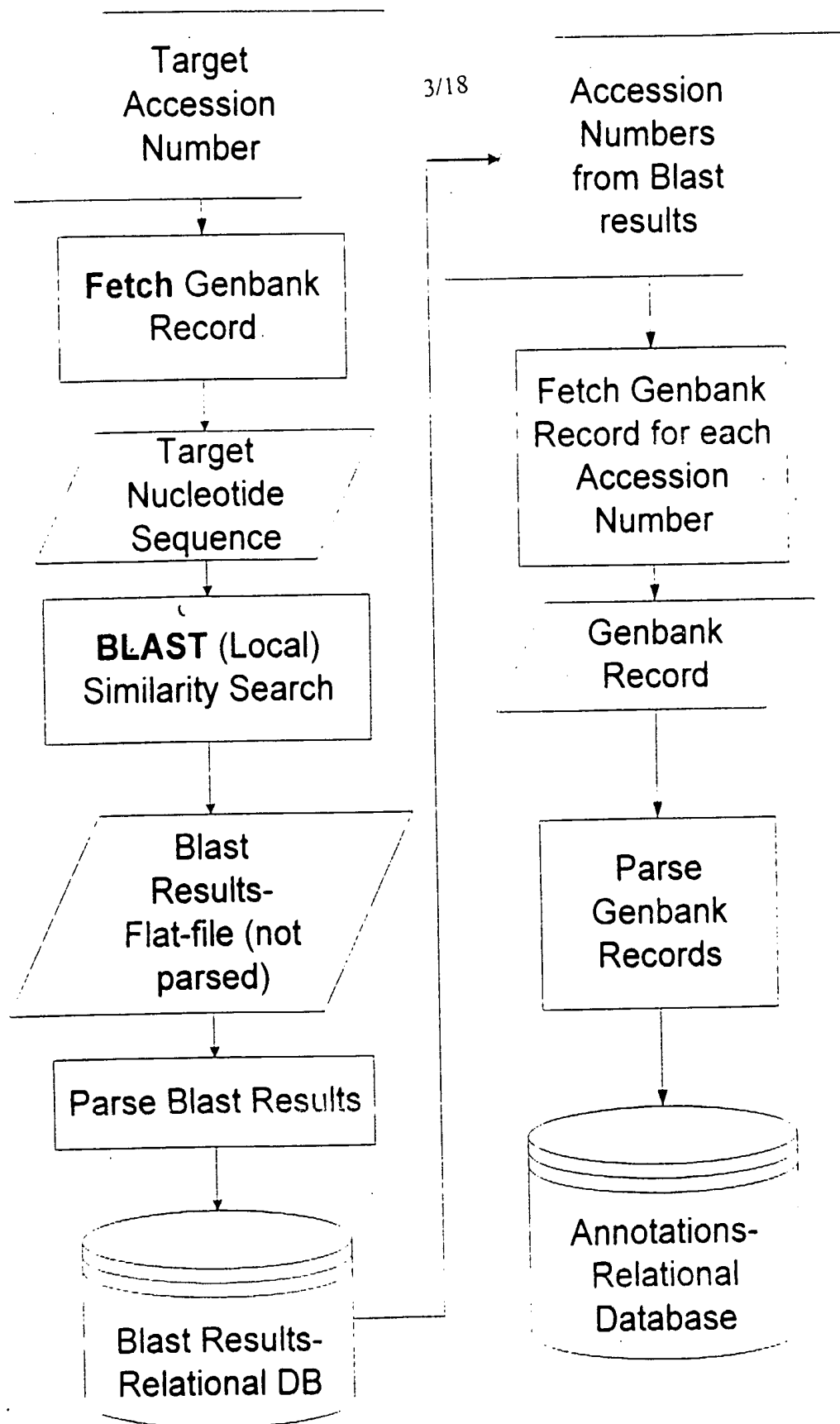


FIGURE 2



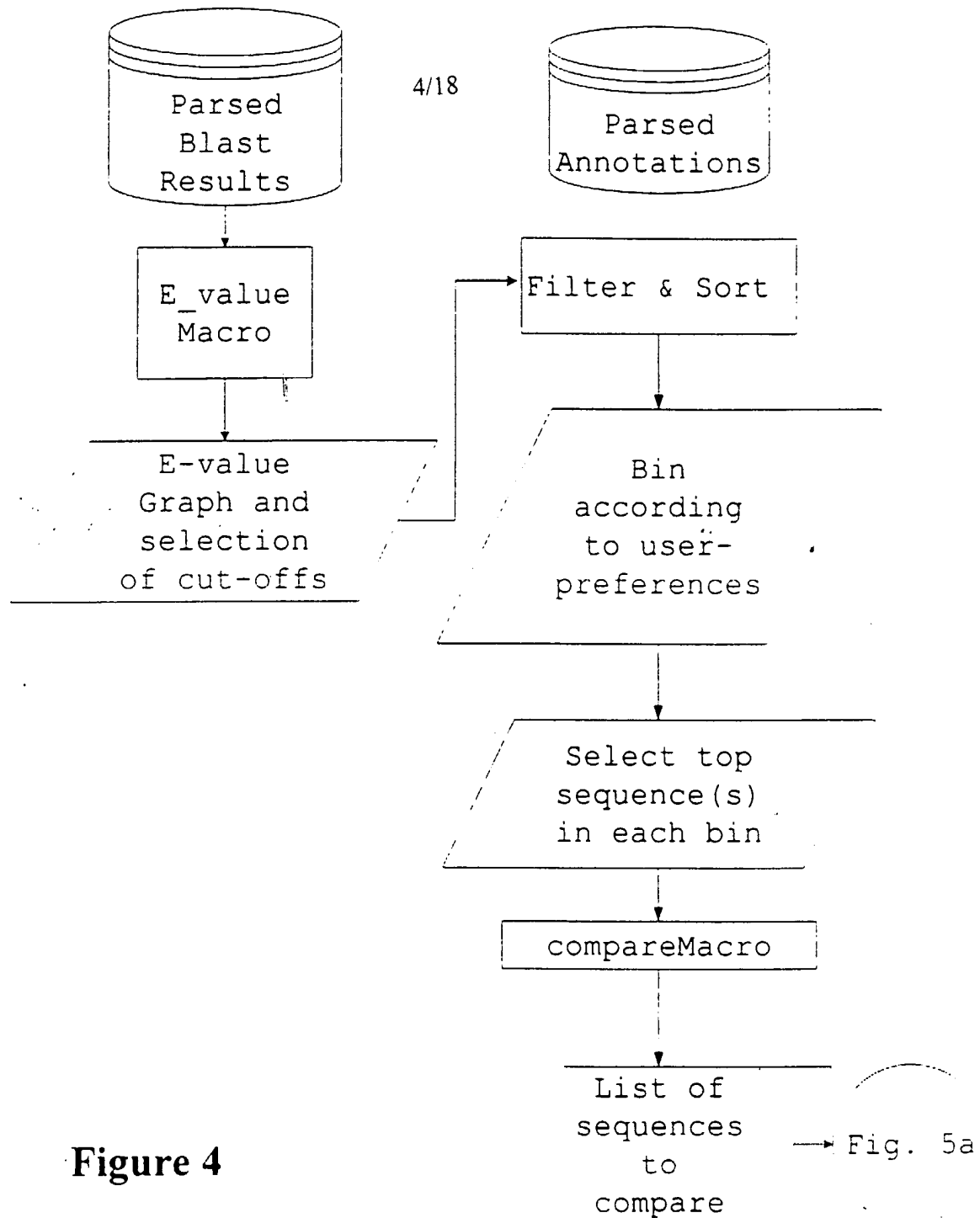
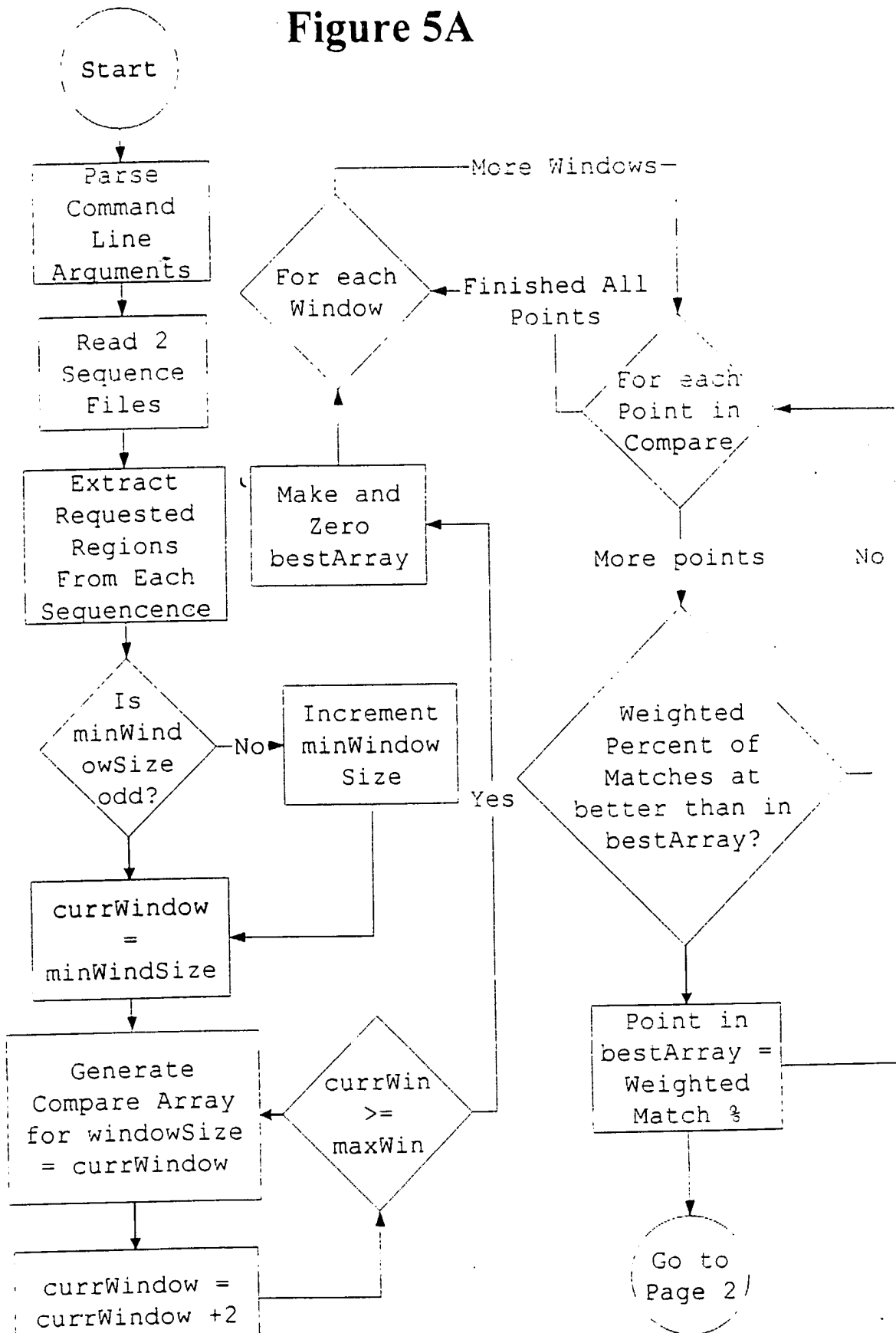


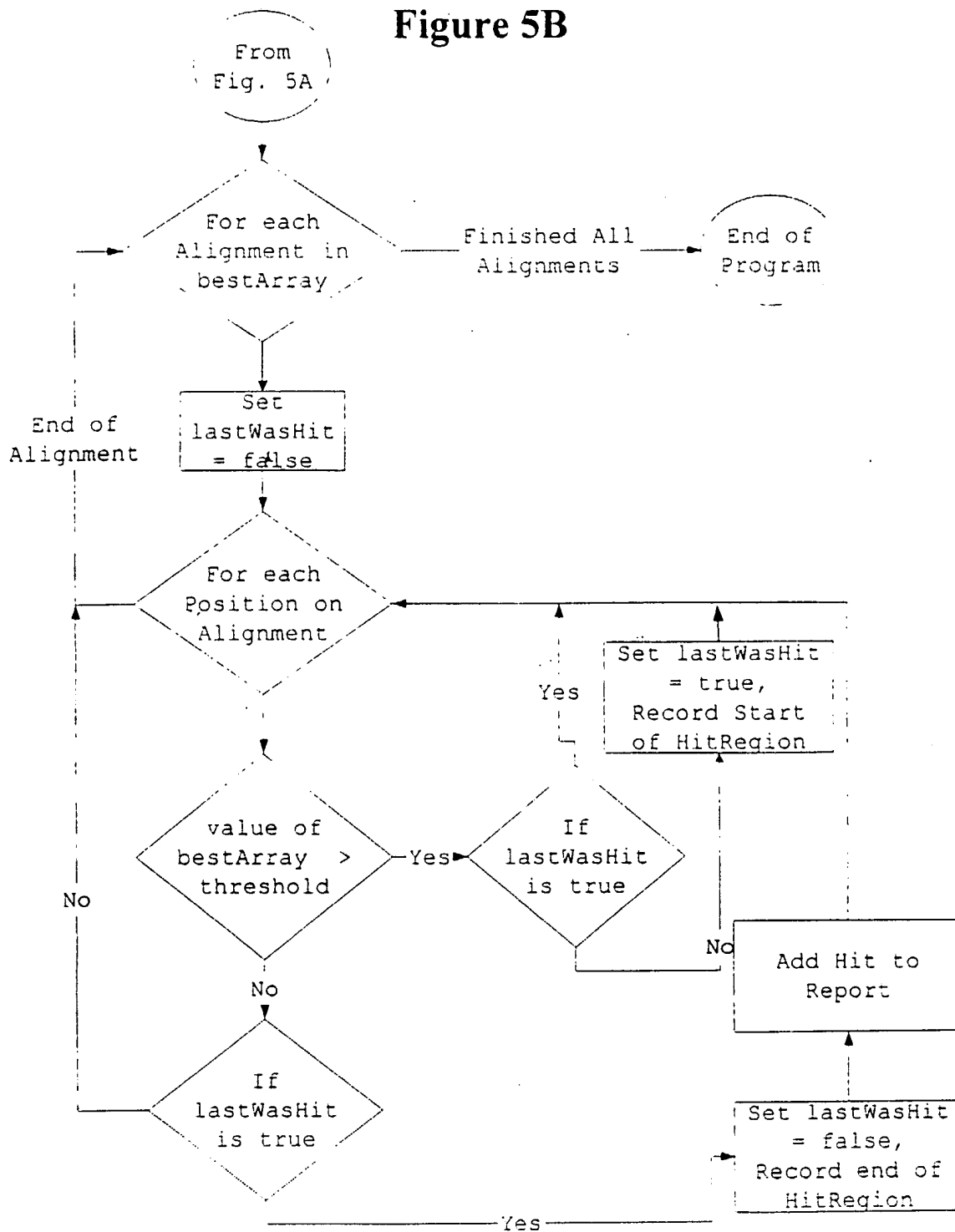
Figure 4

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Figure 5A



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Figure 5B

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Figure 5C

Input:

Sequence A length a

Sequence B length b

Window Size

Output:

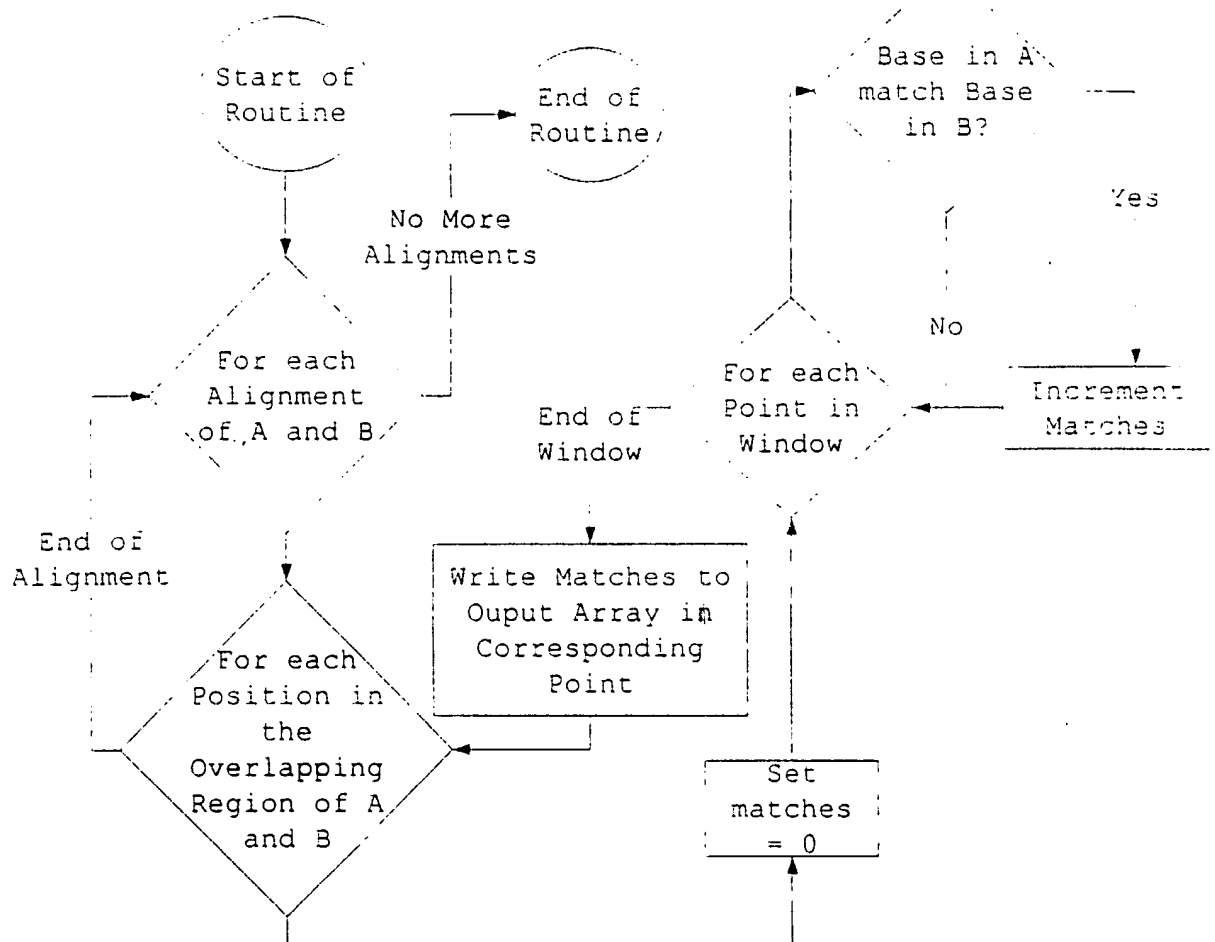
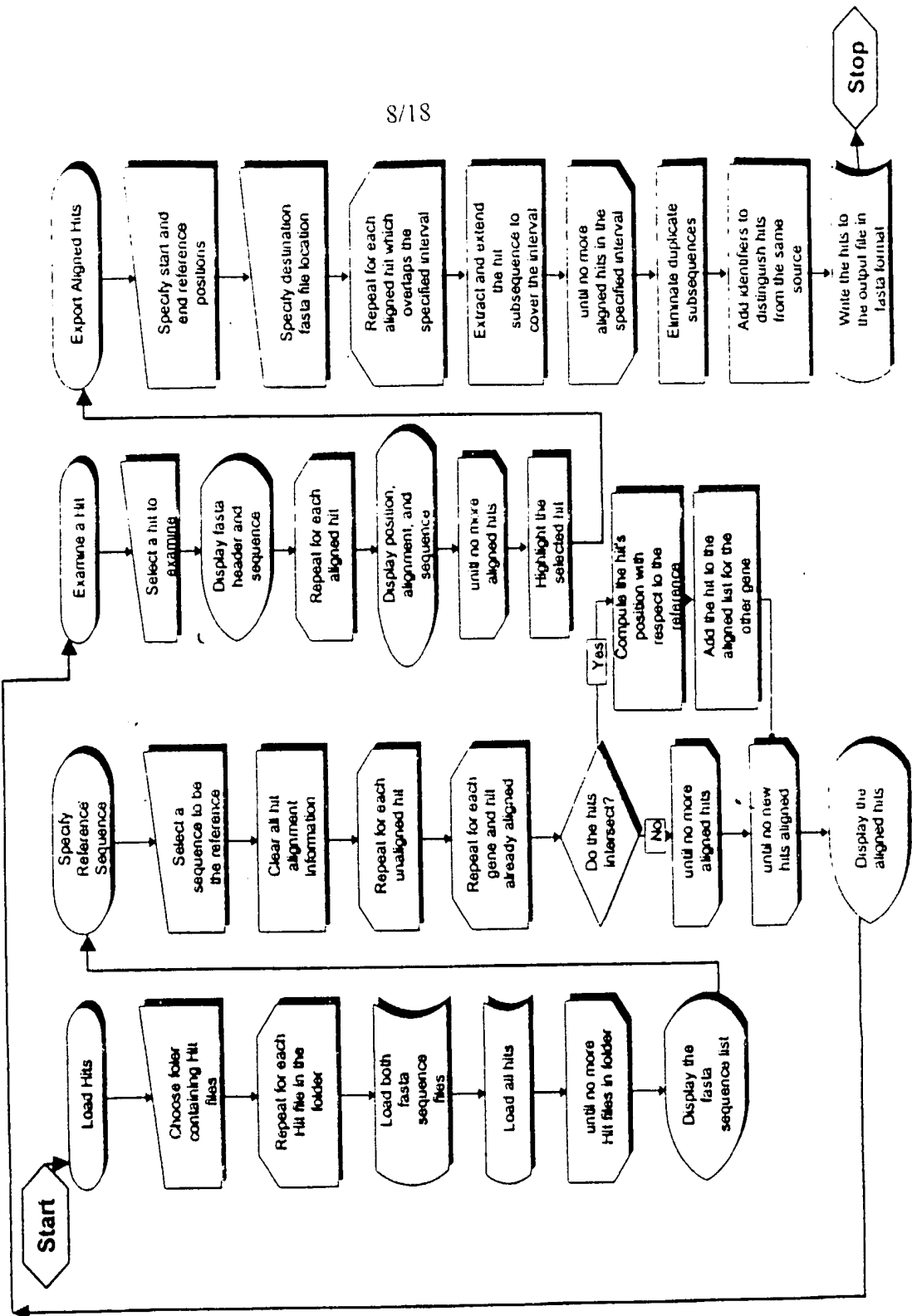
Array of size a by b of unsigned
chars (0-255)Each point represents the number of
matches in the window at that
alignment and position

Fig. 5D



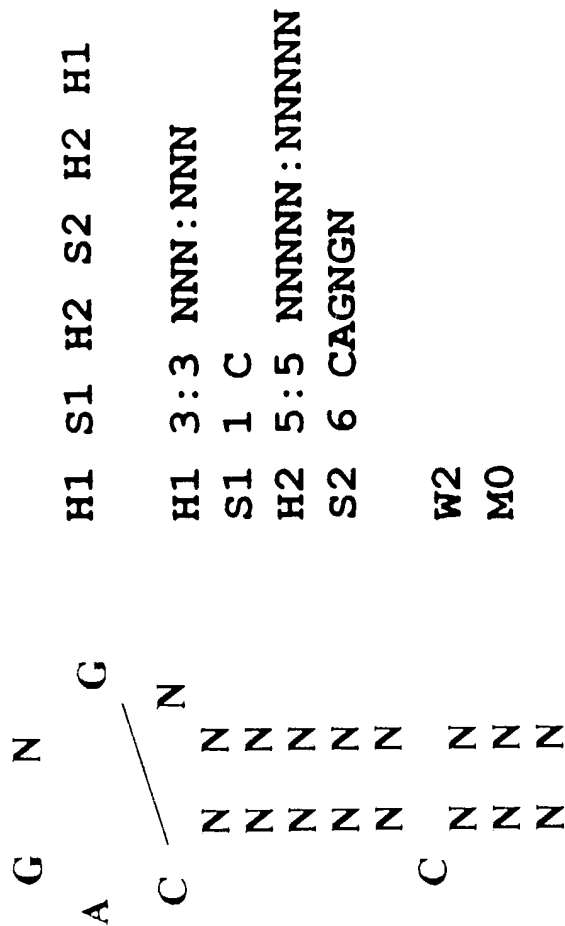
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IRE String descriptor

This descriptor allows for

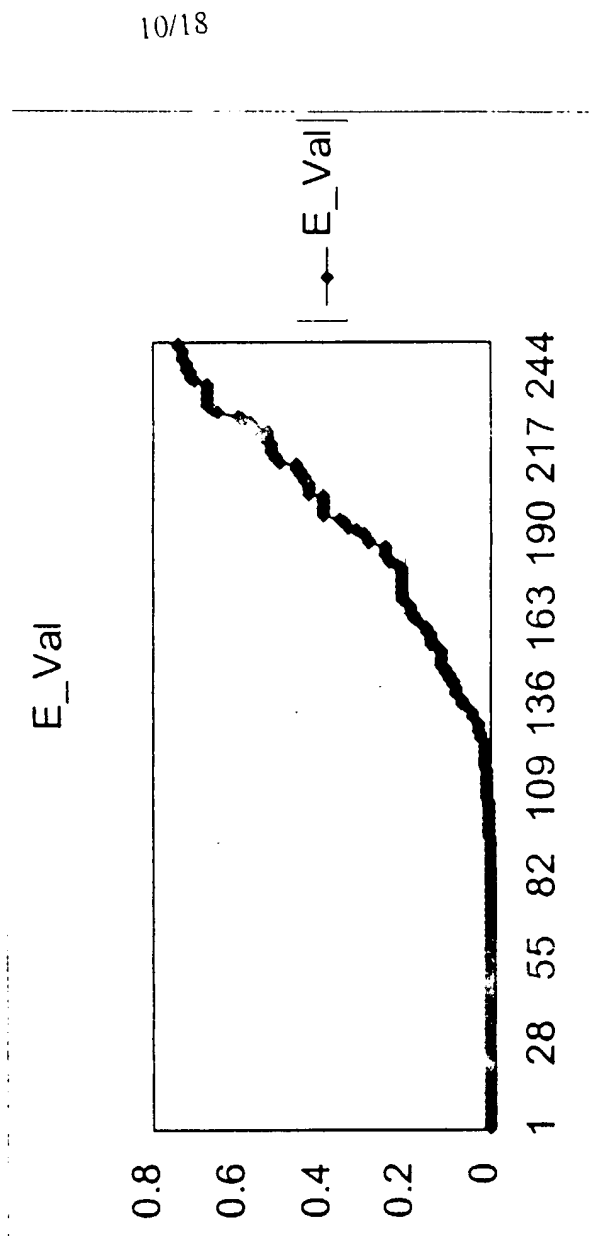
- a wobble (W) of 2
- no mismatches.
- N can be any nucleotide
- H refers to the stem region
- S refers to the single stranded region.

Figure 6



IRE Stem-loop Model

Figure 7



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	HUMAN PIC	HAMSTER MOUSE RAT	CHICKEN	TROUT SALMON	XENOPUS FROG	FLY	MOSQUITO
G-U	A	A	A	A	A	A	A
G	G	G	G	G	G	G	G
C	C	C	C	C	C	C	C
A-U	A-U	A-U	A-U	A-U	A-U	C-G	C-G
A-U	A-U	A-U	A-U	A-U	A-U	G-U	G-U
C-G	C-G	C-G	C-G	C-G	C-G	C-G	U-A
U-G	U-G	U-G	U-G	U-A	U-A	G-U	G-U
U-A	U-A	U-A	G-A	U-A	U-A	U-A	U-A
C	C	C	C	C	C	C	C
G-C	G-C	G-C	G-C	G-C	G-C	U-A	U-A
U-G	U-G	U-G	U-G	U-G	U-G	U-A	U-A
C-G	C-G	C-G	C-G	U-G	U-G	C-G	C-G

HUMAN PIC	No	No	Yes	Yes	Yes	No	No
HAMSTER MOUSE RAT		No	Yes	Yes	Yes	No	No
CHICKEN			No	Yes	Yes	No	No
TROUT SALMON				No	Yes	Yes	Yes
XENOPUS FROG					No	Yes	Yes
FLY						No	Yes
MOSQUITO							No

Figure 8

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Figure 9

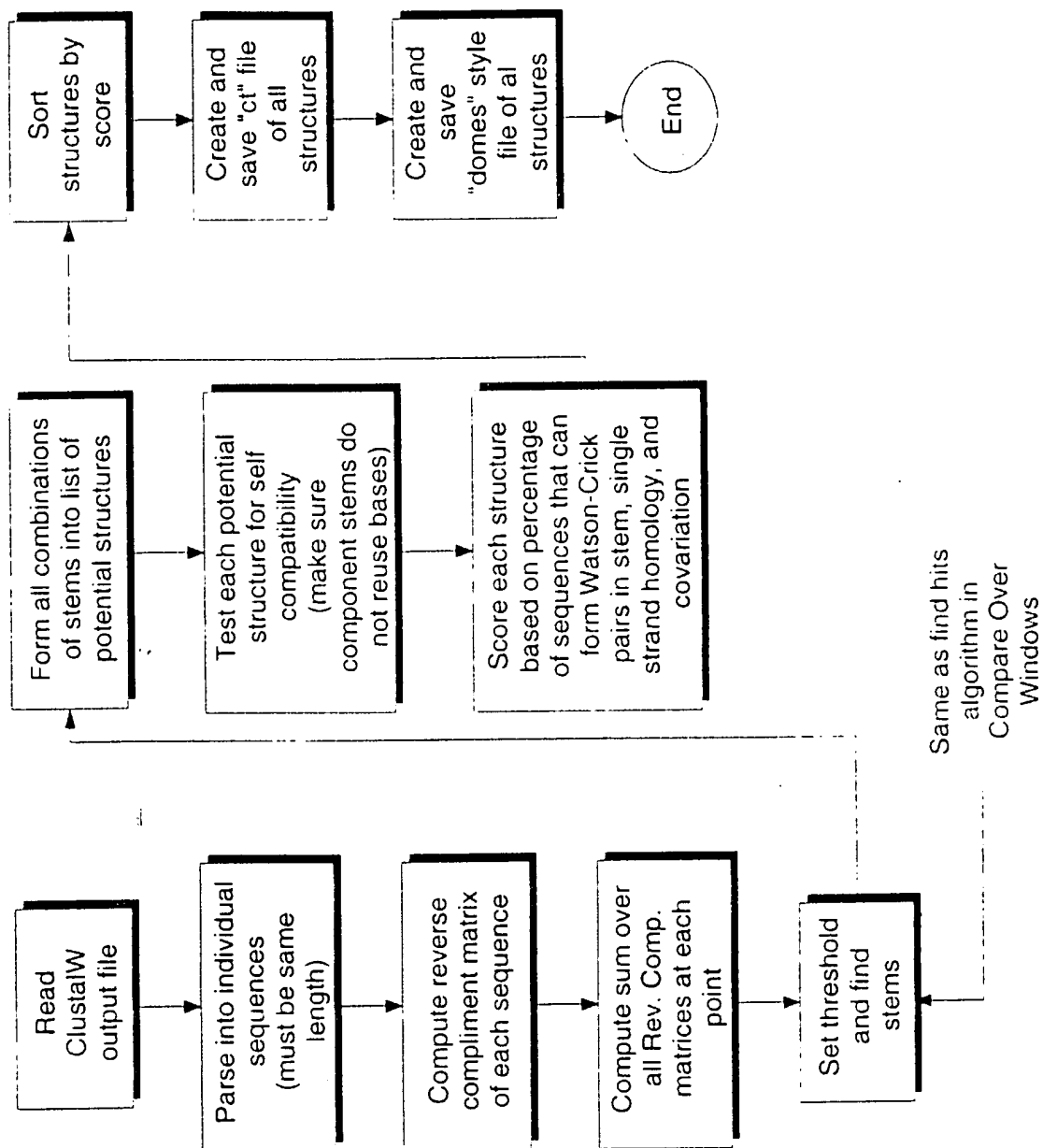
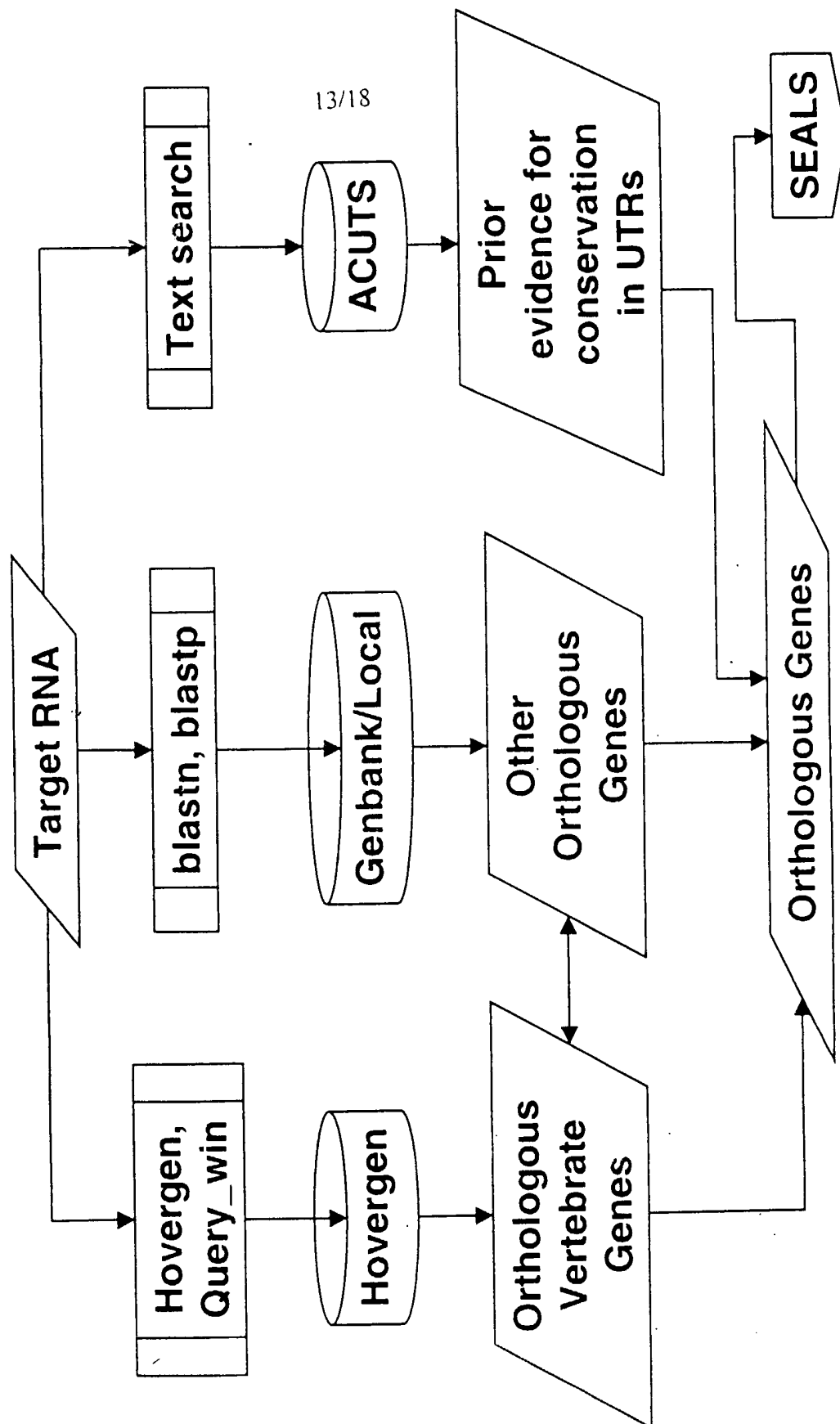


Figure 10



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Figure 11

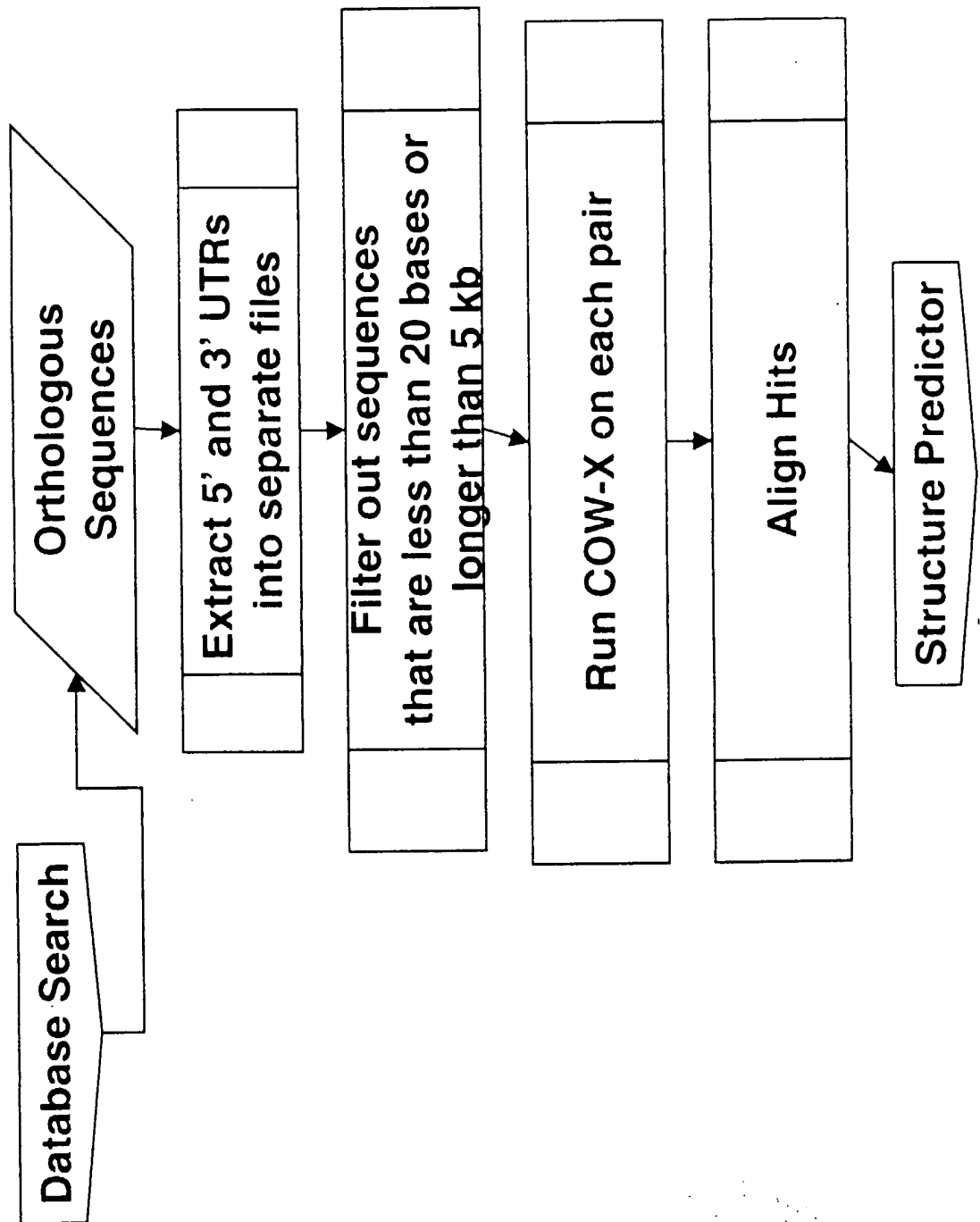


Figure 12

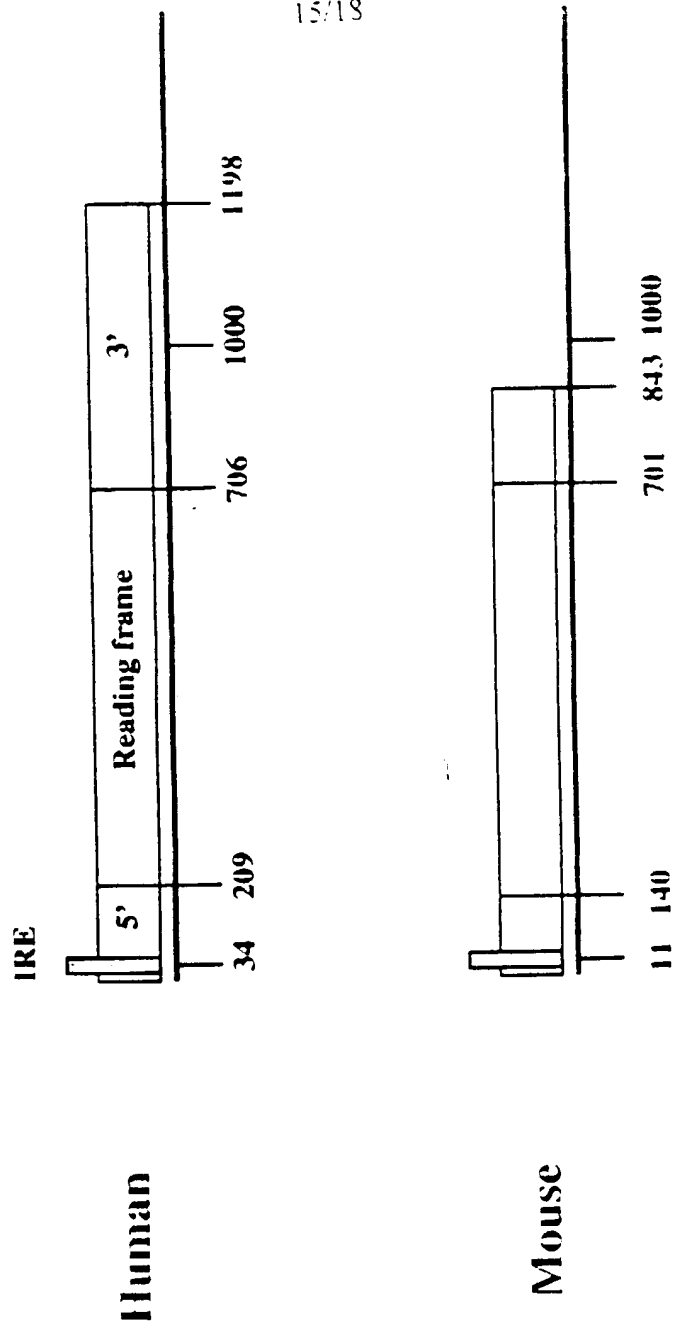


Figure 13

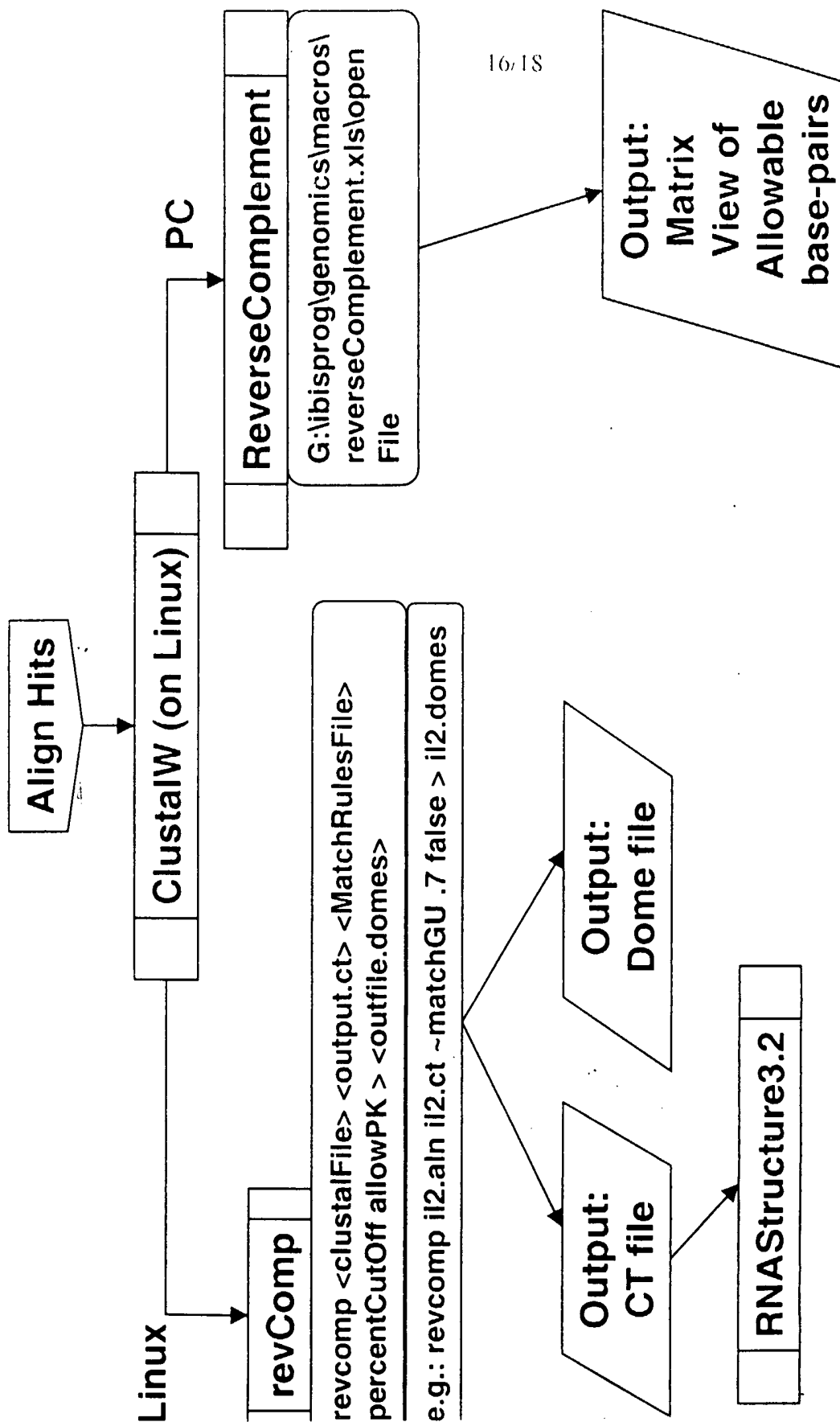


Figure 14

IRE Structures for each species

<p>17/18</p> <p>GU A G U</p> <p>A C C</p> <p>A-U A-U C-G U-G U-A C</p> <p>G-C U-G C-G</p> <p>HUMAN PIG</p>	<p>GU A G U</p> <p>A C C</p> <p>A-U A-U C-G U-G U-A C</p> <p>G-C U-G C-G</p> <p>HAMSTER MOUSE RAT</p>	<p>GU A G U</p> <p>A C C</p> <p>A-U A-U C-G U-G U-A C</p> <p>G-C U-G C-G</p> <p>CHICKEN</p>	<p>GU A G U</p> <p>A C C</p> <p>A-U A-U C-G U-A U-A C</p> <p>G-C U-G U-G</p> <p>TROUT SALMON</p>	<p>GU A G U</p> <p>A C C</p> <p>A-U A-U C-G U-A U-A C</p> <p>G-C U-G U-G</p> <p>XENOPUS FROG</p>	<p>GU A G U</p> <p>A C C</p> <p>C-G G-U C-G G-U U-A C</p> <p>U-A U-A C</p> <p>U-A U-A C-G</p> <p>FLY</p>	<p>GU A G U</p> <p>A C C</p> <p>C-G G-U U-A C</p> <p>C-G G-U U-A C-G</p> <p>MOSQUITO</p>
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